

PTO-1449

Application No.

10/766,243

Applicant(s)

Shilin Chen

Information Disclosure Citation
in an Application

Docket Number

074263.0212
(SC-98-025 C3-C)

Group Art Unit

2128

Filing Date

Jan. 26, 2004

U.S. PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|---|--------------|------------|-----------------|-------|----------|-------------|
| A | 1,209,299 | 12/19/1916 | Hughes | -- | -- | 12/30/1914 |
| B | 1,263,802 | 04/23/1918 | Reed | -- | -- | 08/13/1917 |
| C | 1,394,769 | 10/25/1921 | Sorensen | -- | -- | 05/18/1920 |
| D | 4,056,153 | 11/01/1977 | Miglierini | 175 | 376 | 07/16/1976 |
| E | 4,627,276 | 12/09/1986 | Burgess et al. | 73 | 151 | 12/27/1984 |
| F | 5,010,789 | 04/30/1991 | Brett et al. | 76 | 108.2 | 10/06/1989 |
| G | 5,042,596 | 08/27/1991 | Brett et al. | 175 | 57 | 07/12/1990 |
| H | 5,131,478 | 07/21/1992 | Brett et al. | 175 | 57 | 06/10/1990 |
| I | 5,216,917 | 06/08/1993 | Detournay | 73 | 151 | 07/11/1991 |
| J | RE 34,435 | 11/09/1993 | Warren et al | 175 | 398 | 03/11/1992 |
| K | 5,305,836 | 04/26/1994 | Holbrook et al. | 175 | 39 | 04/08/1992 |
| L | 5,456,141 | 10/10/1995 | Ho | 76 | 108.2 | 11/12/1993 |
| M | 5,605,198 | 02/25/1997 | Tibbitts et al. | 175 | 432 | 04/28/1995 |
| N | 5,767,399 | 06/16/1998 | Smith et al. | 73 | 152.11 | 03/25/1996 |
| O | 6,142,247 | 11/07/2000 | Pessier | 175 | 340 | 07/19/1996 |
| P | 6,348,110 | 02/19/2002 | Evans | 148 | 528 | 04/05/2000 |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|---|--------------|------------|---------|--------|----------|-------------|----|
| | | | | | | YES | NO |
| Q | 1654515 A1 | 03/29/1988 | SU | E 21 B | 10/16 | X | |
| R | 1691497 A1 | 05/30/1988 | SU | E 21 B | 10/16 | X | |
| S | 0384734 A1 | 08/29/1990 | EPO | E 21 B | 10/46 | X | |
| T | 2367578 A | 04/10/2002 | GB | E 21 B | 10/56 | X | |
| U | 2367579 A | 04/10/2002 | GB | E 21 B | 10/56 | X | |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

| | | | | |
|--|--|----------------|------------------------------------|--|
| PTO-1449 Information Disclosure Citation In an Application | Application No. 10/766,243 | | Applicant(s) Shilin Chen | |
| | Docket Number | Group Art Unit | Filing Date | |
| | 074263.0212 (SC-98-025 C3-C) | 2128 | Jan. 26, 2004 | |

U.S. PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE | |
|----|--------------|-----------------|------------|----------------|----------|-------------|------------|
| MA | A | 6,349,595 | 02/26/2002 | Civolani et al | 73 | 152.02 | 09/27/2000 |
| | B | 6,374,930 | 04/23/2002 | Singh et al. | 175 | 374 | 06/08/2000 |
| | C | 6,516,293 | 02/04/2003 | Huang et al. | 703 | 10 | 03/13/2000 |
| | D | 6,533,051 | 03/18/2003 | Singh et al. | 175 | 371 | 09/07/1999 |
| | E | 2004/0045742 A1 | 03/11/2004 | Chen | 175 | 374 | 03/08/2003 |
| MA | F | 2004/0104053 A1 | 06/03/2004 | Chen | 175 | 341 | 03/08/2003 |
| | G | | | | | | |
| | H | | | | | | |
| | I | | | | | | |

| | OTHER DOCUMENTS (Including Author, Title, Source, and Pertinent Pages) | DATE |
|-----------|---|------|
| <i>MA</i> | J M.C. Sheppard, et al., "Forces at the Teeth of a Drilling Rollercone Bit: Theory and Experiment", Proceedings: 1988 SPE Annual Technical Conference and Exhibition; Houston, TX, USA, Oct. 2-5, 1988, Vol. Delta, 1988, pp 253-260 18042, XP002266080, Soc. Pet Eng AIME Pap SPE 1988 Publ by Soc of Petroleum Engineers of AIME, Richardson, TX, USA | |
| | K T.M. Warren et al, "Drag-Bit Performance Modeling", SPE Drill Eng. June 1989, Vol. 4, No. 2, pp 119-127 15618, XP002266079 | |
| | L T.M. Warren, "Factors Affecting Torque for A Roller Cone Bit", JPT J PET Technol Sept. 1984, Vol. 36, No. 10, pp 1500-1508, XP002266078 | |
| | M D.K. Ma, A New Method of Description of Scraping Characteristics of Roller Cone Bit, Petroleum Machinery, July, 1988 (English translations with original Chinese version attached) | |
| | N Wilson C. Chin, Wave Propagation in Petroleum Engineering (1994) | |
| | O Brochure entitled "Twist & Shout", (SB2255.1001), 4 pages | |
| | P B.L. Steklyanov, et al, "Improving the Effectiveness of Drilling Tools," Series KhM-3, Oil Industry Machine Building, pub. Central Institute for Scientific and Technical Information and Technical and Economic Research on Chemical and Petroleum Machine Buidling, Tsintikhimnéftemash, Moscow, 1991 (translated from Russian) | |
| | Q Energy Balanced Series Roller Cone Bits, www.halliburton.com/oil_gas/sd1380.jsp | |
| | R Ashmore, et al., Stratapax™ Computer Program, Sandia Laboratories, Albuquerque, NM, (76 pages) | |
| <i>MA</i> | S F.A.S.T.™ Technology Brochure entitled "Tech Bits", Security/Dresser Industries, Sept. 17, 1993 (1 page) | |


EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

DAL01:816487.1

| | | | | | | |
|--|---|---|--|-------------------------------------|----------|-----------------------|
| PTO-1449 Information Disclosure Citation In an Application | | Application No. 10/766,243 | | Applicant(s) Shilin Chen | | |
| | | Docket Number 074263.0212 (SC-98-025 C3-C) | Group Art Unit 2128 | Filing Date Jan. 26, 2004 | | |
| U.S. PATENT DOCUMENTS | | | | | | |
| | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
| A | | | | | | |
| B | | | | | | |
| C | | | | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | |
| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES NO |
| D | | | | | | |
| E | | | | | | |
| F | | | | | | |
| | OTHER DOCUMENTS (Including Author, Title, Source, and Pertinent Pages) | | | | | DATE |
| G | Sii PLUS Brochure entitled "The PDC Plus Advantage", from Smith International (2 pages) | | | | | |
| H | Specification sheet entitled "SQAIR Quality Sub-Specification", Shell Internationale Petroleum Mij. B.V., The Hague, The Netherlands, 1991 (2 Pages) | | | | | |
| I | Brochure entitled "FM2000 Series-Tomorrow's Technologies for Today's Drilling.", Security DBS, Dresser Industries, Inc., 1994 (Pages) | | | | | |
| J | Brochure entitled "FS2000 Series-New Steel Body Technology Advances PDC Bit Performance and Efficiency", Security DBS, Dresser Industries, Inc., 1997 (6 pages) | | | | | |
| K | | | | | | |
| L | | | | | | |
| M | | | | | | |
| N | | | | | | |
| O | | | | | | |
| P | | | | | | |
| Q | | | | | | |
| R | | | | | | |
| S | | | | | | |
| EXAMINER  | | | DATE CONSIDERED 9/22/05 | | | |

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

DAL01:816487.1

| | | | | |
|---|--|-------------------------------------|--|--|
| PTO-1449 Information Disclosure Citation In an Application | Application No. | | Applicant(s) Shilin Chen | |
| | Docket Number 074263.0212 (SC-98-025 C3-C) | Group Art Unit Unassigned | Filing Date January 26, 2004 | |

U.S. PATENT DOCUMENTS

| | | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|----|---|--------------|------------|-------------------|-------|----------|-------------|
| 40 | A | 1,847,981 | 03/01/1932 | C.E. Reed | -- | -- | 07/23/1930 |
| | B | 2,117,679 | 05/17/1938 | C.E. Reed | 255 | 71 | 12/27/1935 |
| | C | 2,122,759 | 07/05/1938 | F.L. Scott | 255 | 71 | 07/16/1936 |
| | D | 2,132,498 | 10/11/1938 | H.C. Smith | 255 | 71 | 07/22/1936 |
| | E | 2,165,584 | 07/11/1939 | H.C. Smith et al. | 255 | 71 | 07/22/1936 |
| | F | 2,230,569 | 02/04/1941 | J.H. Howard et al | 255 | 71 | 12/20/1939 |
| | G | 2,496,421 | 02/07/1950 | J.C. Stokes | 255 | 71 | 05/07/1946 |
| | H | 2,728,559 | 12/27/1955 | E.G. Boice et al. | 255 | 334 | 12/10/1951 |
| | I | 2,851,253 | 09/09/1958 | E.G. Boice | 255 | 347 | 04/27/1954 |
| | J | 4,187,922 | 02/12/1980 | Phelps | 175 | 374 | 05/12/1978 |
| | K | 4,334,586 | 06/15/1982 | Schumacher | 175 | 374 | 06/05/1980 |
| | L | 4,343,371 | 08/10/1982 | Baker III, et al | 175 | 329 | 04/28/1980 |
| | M | 4,393,948 | 07/19/1983 | Fernandez | 175 | 374 | 04/01/1981 |
| | N | 4,408,671 | 10/11/1983 | Munson | 175 | 377 | 02/19/1982 |
| | O | 4,427,081 | 01/24/1984 | Crawford | 175 | 376 | 01/19/1982 |
| | P | 4,611,673 | 09/16/1986 | Childers et al | 175 | 340 | 11/21/1983 |
| 78 | Q | 4,657,093 | 04/14/1987 | Schumacher | 175 | 353 | 02/03/1982 |

FOREIGN PATENT DOCUMENTS

| | | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|----|---|---------------|------------|---------|--------|----------|-------------|----|
| | | | | | | | YES | NO |
| 14 | R | SU 1768745 A1 | 10/15/1992 | SU | E 21 B | 10/16 | X | |
| | S | SU 1441051 A2 | 11/30/1988 | SU | E 21 B | 10/16 | X | |
| | T | EP 0511547 A2 | 04/14/1992 | EPO | E 21 B | 10/16 | X | |
| | U | EP 0511547 A3 | 04/14/1992 | EPO | E 21 B | 10/16 | X | |
| 16 | V | EP 0511547 B1 | 04/14/1992 | EPO | E 21 B | 10/16 | X | |

| | |
|-----------------------------|--------------------------------|
| EXAMINER <i>[Signature]</i> | DATE CONSIDERED <i>9/22/05</i> |
|-----------------------------|--------------------------------|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

| | | | | |
|--|--|------------------------------|---------------------------------|--|
| PTO-1449 Information Disclosure Citation In an Application | Application No. | | Applicant(s) Shilin Chen | |
| | Docket Number 074263.0212 (SC-98-025 C3-C) | Group Art Unit Unassigned | Filing Date January 26, 2004 | |


U.S. PATENT DOCUMENTS

| | | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|----|--|--------------|------------|-------------------|-------|----------|-------------|
| W | | 4,815,342 | 03/25/1989 | Brett et al. | 76 | 108 | 12/15/1987 |
| X | | 4,848,476 | 07/18/1989 | Deane et al | 175 | 340 | 02/29/1988 |
| Y | | 5,137,097 | 08/11/1992 | Fernandez | 175 | 228 | 10/30/1990 |
| Z | | 5,197,555 | 03/30/1993 | Estes | 175 | 374 | 05/22/1991 |
| AA | | 5,224,560 | 07/06/1993 | Fernandez | 175 | 374 | 05/18/1992 |
| AB | | 5,311,958 | 05/17/1994 | Isbell et al | 175 | 341 | 09/23/1992 |
| AC | | 5,318,136 | 06/07/1994 | Rowell et al | 175 | 24 | 03/06/1991 |
| AD | | 5,341,890 | 08/30/1994 | Cowthorne et al | 175 | 374 | 01/08/1993 |
| AE | | 5,370,234 | 12/06/1994 | Sommer, Jr. et al | 209 | 44.1 | 11/08/1991 |
| AF | | 5,372,210 | 12/13/1994 | Harrell | 175 | 431 | 10/12/1993 |
| AG | | 5,394,952 | 03/07/1995 | Johns et al | 175 | 332 | 08/24/1993 |
| AH | | 5,415,030 | 05/16/1995 | Jogi et al. | 73 | 151 | 04/08/1994 |
| AI | | 5,416,697 | 05/16/1995 | Goodman | 364 | 422 | 07/31/1992 |
| AJ | | 5,421,423 | 06/06/1995 | Huffstutler | 175 | 374 | 03/22/1994 |
| AK | | 5,704,436 | 01/06/1998 | Smith et al | 175 | 27 | 03/25/1996 |

FOREIGN PATENT DOCUMENTS

| | | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|----|--|--------------|------------|---------|-------|----------|-------------|----|
| | | | | | | | YES | NO |
| AL | | GB 2241266 A | 08/28/1991 | GB | E21B | 10/46 | X | |

| | | OTHER DOCUMENTS (Including Author, Title, Source, and Pertinent Pages) | DATE |
|----|--|---|------|
| AM | | MA Dekun, <i>The Operational Mechanics of the Rock Bit</i> , Petroleum Industry Press, Beijing, China, (1996) | |
| AN | | D. Ma, D. Zhou & R. Deng, <i>The Computer Stimulation of the Interaction Between Roller Bit and Rock</i> , (1995) | |
| AO | | Shilin Chen, <i>Linear and Nonlinear Dynamics of Drillstrings</i> , (1994-1995) | |
| AP | | D. Ma, & J.J. Azar, <i>Dynamics of Roller Cone Bits</i> , (12/1985) | |
| AQ | | D.K.Ma & S.L. Yang, <i>Kinematics of the Cone Bit</i> , (06/1985) | |
| AR | | Dma & J.J. Azar, <i>A New Way to Characterize the Gouging-Scraping Action of Roller Cone Bits</i> , (1989) | |
| AS | | Russian bit catalog listing items "III 190,5 T-11B-1" and "III 109,5 TKZ-11B", (prior 1997) | |
| AT | | L.E. Hibbs, Jr., et al, <i>Diamond Compact Cutter Studies for Geothermal Bit Design</i> , (Nov. 1978) | |

| | |
|---|----------------------------|
| EXAMINER  | DATE CONSIDERED 9/22/05 |
| EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant. | |

U.S. PATENT AND TRADEMARK OFFICE

| | | | | |
|--|--|------------------------------|---------------------------------|--|
| PTO-1449 Information Disclosure Citation In an Application | Application No. | | Applicant(s) Shilin Chen | |
| | Docket Number 074263.0212 (SC-98-025 C3-C) | Group Art Unit Unassigned | Filing Date January 26, 2004 | |

U.S. PATENT DOCUMENTS

| | | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|----|----|--------------|------------|---------------------|-------|----------|-------------|
| 78 | AU | 5,715,899 | 02/10/1998 | Liang et al | 175 | 374 | 02/02/1996 |
| | AV | 5,730,234 | 03/24/1998 | Putot | 175 | 50 | 05/14/1996 |
| | AW | 5,794,720 | 08/18/1998 | Smith et al | 175 | 40 | 03/25/1996 |
| | AX | 5,812,068 | 09/22/1998 | Wisler et al | 340 | 855.5 | 12/12/1995 |
| | AY | 5,813,480 | 09/29/1998 | Zaleski, Jr., et al | 175 | 40 | 12/03/1996 |
| | AZ | 5,813,485 | 09/29/1998 | Portwood | 175 | 430 | 06/21/1996 |
| | BA | 5,839,526 | 11/24/1998 | Cisneros, et al. | 175 | 431 | 04/04/1997 |
| | BB | 6,002,985 | 12/14/1999 | Stephenson | 702 | 13 | 05/06/1997 |
| | BC | 6,012,015 | 01/04/2000 | Tubel | 702 | 6 | 09/18/1997 |
| | BD | 6,021,377 | 02/01/2000 | Dubinsky et al | 702 | 9 | 10/23/1996 |
| | BE | 6,044,325 | 03/28/2000 | Chakravarthy et al | 702 | 7 | 07/21/1998 |
| | BF | 6,057,784 | 05/02/2000 | Schaaf et al | 340 | 854.4 | 09/02/1997 |
| | BG | 6,095,262 | 08/01/2000 | Chen | 175 | 57 | 08/31/1999 |
| | BH | 6,109,368 | 09/29/2000 | Goldman et al | 175 | 39 | 11/13/1998 |
| | BI | 6,213,225 | 04/10/2001 | Chen | 175 | 57 | 08/31/1999 |
| | BJ | 6,241,034 | 06/01/2001 | Steinke et al | 175 | 331 | 09/03/1998 |
| 79 | BK | 6,401,839 | 06/01/2002 | Chen | 175 | 57 | 03/10/2000 |

FOREIGN PATENT DOCUMENTS

| | | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|--|----|--------------|------|---------|-------|----------|-------------|----|
| | | | | | | | YES | NO |
| | BL | | | | | | | |
| | BM | | | | | | | |

| | | OTHER DOCUMENTS (Including Author, Title, Source, and Pertinent Pages) | DATE |
|----|----|---|------|
| 80 | BN | Adam T. Bourgoyne Jr et. al., "Applied Drilling Engineering", Society of Petroleum Engineers Textbook Series (1991) | |
| 81 | BO | J. P. Nguyen, "Oil and Gas Field Development Techniques: Drilling" (translation 1996, from French original 1993) | |

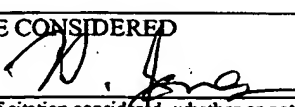
EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

DAL01:777464.1

| | | | | | | | |
|---|---|--|-------------------------------------|--|--------------|-----------------|----------------------|
| PTO-1449 Information Disclosure Citation In an Application | | Application No. | | Applicant(s) Shilin Chen | | | |
| | | Docket Number 074263.0212 (SC-98-025 C3-C) | Group Art Unit Unassigned | Filing Date January 26, 2004 | | | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| | | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
| <i>BP</i> | | 6,412,577 | 07/02/2002 | Chen | 175 | 57 | 08/01/2000 |
| <i>BQ</i> | | 6,527,068 | 03/01/2003 | Singh et al | 175 | 431 | 08/16/2000 |
| <i>BR</i> | | | | | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| | | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION |
| | | | | | | | YES NO |
| <i>BS</i> | | | | | | | |
| LITIGATION DOCUMENTS | | | | | | | DATE |
| <i>BT</i> | Plaintiff's Original Complaint for Patent Infringement and Jury Demand, filed September 6, 2002 in the United States District Court for the Eastern District of Texas, Sherman Division, Civil Action No. 4-02CV269, <i>Halliburton Energy Services, Inc. v. Smith International, Inc.</i> , 4 pages | | | | | | 09/06/2002 |
| <i>BU</i> | Answer and Counterclaim of Smith International, filed March 14, 2003, in the United States District Court for the Eastern District of Texas, Sherman Division, Civil Action No. 4-02CV269, <i>Halliburton Energy Services, Inc. v. Smith International, Inc.</i> , 6 pages | | | | | | 03/14/2003 |
| <i>BV</i> | Response of Plaintiff and Counterclaim Defendant to Defendant's Counterclaim of Declaratory Judgment, filed April 3, 2003, in the United States District Court for the Eastern District of Texas, Sherman Division, Civil Action No. 4-02CV269, <i>Halliburton Energy Services, Inc. v. Smith International, Inc.</i> , 3 pages | | | | | | 04/03/2003 |
| <i>BW</i> | First Amended Answer and Counterclaim of Smith International, filed October 9, 2003, in the United States District Court for the Eastern District of Texas, Sherman Division, Civil Action No. 4-02CV269, <i>Halliburton Energy Services, Inc. v. Smith International, Inc.</i> , 8 pages | | | | | | 10/09/2003 |
| OTHER DOCUMENTS (Including Author, Title, Source, and Pertinent Pages) | | | | | | | DATE |
| <i>BX</i> | "Making Hole", part of Rotary Drilling Series, edited by Charles Kirkley (1983) | | | | | | |
| <i>BY</i> | "Drilling Mud", part of Rotary Drilling Series, edited by Charles Kirkley (1984) | | | | | | |
| <i>BZ</i> | H.G. Benson, "Rock Bit Design, Selection and Evaluation", presented at the spring meeting of the pacific coast district, American Petroleum Institute, Division of Production, Los Angeles, May, 1956 | | | | | | |
| <i>CA</i> | J.C. Estes, "Selecting the Proper Rotary Rock Bit", Journal of Petroleum Technology, Nov., 1971, pp1359-1367 | | | | | | |
| <i>CB</i> | Sikarskie, et. al., "Penetration Problems in Rock Mechanics", American Society of Mechanical Engineers, Rock Mechanics Symposium, 1973 | | | | | | |
| <i>CC</i> | Dykstra, et. al., "Experimental Evaluations of Drill String Dynamics", Amoco Report Number SPE 28323, 1994 | | | | | | |
| <i>CD</i> | Kenner and Isbell, "Dynamic Analysis Reveals Stability of Roller Cone Rock Bits", SPE 28314, 1994 | | | | | | |
| <i>CE</i> | | | | | | | |
| <i>GF</i> | | | | | | | |
| EXAMINER | DATE CONSIDERED  9/22/05 | | | | | | |

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449

Application No.

Applicant(s)

**Information Disclosure Citation
in an Application**

10/766,243

Shilin Chen

Docket Number

Group Art Unit

Filing Date

074263.0212

2128

January 26, 2004

U.S. PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|----|--------------|----------|-------|-------|----------|-------------|
| | 5,853,245 | 12/29/98 | Price | 384 | 96 | 10/1/97 |
| B. | | | | | | |
| C. | | | | | | |
| D. | | | | | | |
| E. | | | | | | |
| F. | | | | | | |
| G. | | | | | | |
| H. | | | | | | |
| I. | | | | | | |
| J. | | | | | | |
| K. | | | | | | |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|----|--------------|----------|---------|--------|----------|-------------|----|
| | | | | | | YES | NO |
| L. | 2327962 | 2/10/99 | GB | E 21 B | 10/16 | X | |
| M. | 2388857 | 11/26/03 | GB | E 21 B | 10/16 | X | |
| N. | | | | | | | |
| O. | | | | | | | |

NON-PATENT DOCUMENTS

| | DOCUMENT (Including Author, Title, Source, and Pertinent Pages) | DATE |
|----|---|-----------|
| P. | Notification of British Search Report for Application No. GB 0503934.2, (3 pages) | 5/16/2005 |
| Q. | | |
| R. | | |
| S. | | |
| T. | | |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

| | | | |
|---|-----------------|----------------|------------------|
| PTO-1449 DEC 15 2004 Information Disclosure Citation in an Application | Application No. | Applicant(s) | |
| | 10/766,243 | Shilin Chen | |
| | Docket Number | Group Art Unit | Filing Date |
| | 074263.0212 | 2128 | January 26, 2004 |

U.S. PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|----|--------------|----------|------|-------|----------|-------------|
| A. | 2004/0167762 | 08/26/04 | Chen | 703 | 10 | 02/26/2004 |
| B. | | | | | | |
| C. | | | | | | |
| D. | | | | | | |
| E. | | | | | | |
| F. | | | | | | |
| G. | | | | | | |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|----|--------------|---------|---------|--------|----------|-------------|----|
| | | | | | | YES | NO |
| H. | CN 2082755U | 8/14/91 | China | E 21 B | 10/50 | X | |
| I. | | | | | | | |
| J. | | | | | | | |

NON-PATENT DOCUMENTS

| | DOCUMENT (Including Author, Title, Source, and Pertinent Pages) | DATE |
|----|---|------------|
| K. | Communication of a Notice of Opposition filed October 4, 2004 with the European Patent Office | 10/04/2004 |
| L. | Communication of a Notice of Opposition filed October 21, 2004, with the European Patent Office | 10/21/2004 |
| M. | Brief Communication from European Patent Office enclosing letter from the opponent of October 13, 2004 | 10/22/2004 |
| N. | Composite Catalog of Oil Filed Equipment & Services, 27th Revision 1666-67 Volume 3 | 1966 |
| O. | Lecture Handouts, Rock Bit Design, Dull grading, Selection and Application, presented by Reed Rock bit Company | 10/16/1980 |
| P. | Longer Useful Lives for Roller Bits Cuts Sharply into Drilling Costs, South African Mining & Engineering Journal, Vol. 90, pgs. 39-43 | 3/1979 |
| Q. | | |
| R. | | |

LITIGATION DOCUMENTS

| | | |
|----|--|------------|
| S. | Memorandum Opinion of Judge Davis, signed February 13, 2004, in the United States District Court for the Eastern District of Texas, Sherman Division, Civil Action No. 4-02CV269, Halliburton Energy Services, Inc. v. Smith International, Inc., 37 pages (including fax coversheet). | 02/19/2004 |
| T. | Final Judgment of Judge Davis, signed August 13, 2004, in the United States District Court for the Eastern District of Texas, Sherman Division, Civil Action No. 4-02CV269, Halliburton Energy Services, Inc. v. Smith International, Inc., 3 pages | 08/13/2004 |
| U. | Sworn written statement of Stephen Steinke and Exhibits SS-1 to SS-6 | 10/13/2004 |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449

Application No.

Applicant(s)

**Information Disclosure Citation
an Application**

10/766,243

Shilin Chen

Docket Number

Group Art Unit

Filing Date

074263.0212

2128

January 26, 2004

U.S. PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|----|--------------|----------|---------------------|-------|----------|-------------|
| A. | 2038386 | 4/21/36 | F.L. Scott et al. | 255 | 71 | 3/9/35 |
| B. | 4455040 | 6/19/84 | Shinn | 285 | 142 | 8/3/81 |
| C. | 4738322 | 4/19/88 | Hall et al. | 175 | 329 | 5/19/86 |
| D. | 5351770 | 10/4/94 | Cawthorne et al. | 175 | 374 | 6/15/93 |
| E. | 5513711 | 05/07/96 | Williams | 175 | 57 | 08/31/94 |
| F. | 5579856 | 12/3/96 | Bird | 175 | 375 | 06/05/95 |
| G. | 5595255 | 01/21/97 | Huffstutler | 175 | 331 | 08/08/94 |
| H. | 5636700 | 06/10/97 | Shamburger, Jr. | 175 | 331 | 01/03/95 |
| I. | 5697994 | 12/16/97 | Packer et al. | 51 | 309 | 5/15/95 |
| J. | 5967245 | 10/19/99 | Garcia et al. | 175 | 374 | 6/20/97 |
| K. | 6308790 | 10/30/01 | Mensa-Wilmot et al. | 175 | 73 | 12/22/99 |
| L. | 6607047 | 8/19/03 | Swadi et al. | 175 | 374 | 4/1/99 |
| M. | 6619411 | 9/16/03 | Singh et al. | 175 | 57 | 1/31/01 |
| N. | 6729420 | 5/4/04 | Mensa-Wilmot | 175 | 385 | 3/25/02 |
| O. | 2004/0254664 | 12/16/04 | Centala et al. | 700 | 97 | 3/25/04 |
| P. | 2005/0015230 | 1/20/05 | Centala et al. | 703 | 10 | 7/13/04 |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|----|--------------|---------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| Q. | 2305195 A | 4/2/97 | GB | E21B | 10/08 | X | |
| R. | 2363409 A | 6/4/01 | GB | E21B | 10/16 | X | |
| S. | 2365899 A | 2/27/02 | GB | E21B | 10/16 | X | |

NON-PATENT DOCUMENTS

| | DOCUMENT (Including Author, Title, Source, and Pertinent Pages) | DATE |
|----|--|----------------|
| T. | Drawing No. A46079 Rock Bit and Hole Opener; Security Engineering Co., Inc., Whittier, California | 09/14/46 |
| U. | "Machino Export", Russia, 4 pages | 1974 |
| V. | R.K. Dropek, "A Study to Determine Roller Cone Cutter Offset Effects at Various Drilling Depths" American Society of Mechanical Engineers. 10 pages. | 8/1/79 |
| W. | U.S. Patent Application Serial No. 10/325,650 filed December 19, 2002 by John G. Dennis, entitled Drilling with Mixed Tooth Types. | Filed 12/19/02 |
| X. | British Search Report for GB Patent Application No. 0504304.7, 4 pgs | 4/22/2005 |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449

Application No.

Applicant(s)

**Information Disclosure Citation
in an Application**

10/766,243

Shilin Chen

Docket Number

Group Art Unit

Filing Date

074263.0212

2128

January 26, 2004

MAY 23 2005

U.S. PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|---|--------------|------------|-------------------|-------|----------|-------------|
| A | 4,285,409 | 08/25/1981 | Allen | 175 | 336 | 06/28/1979 |
| B | 4,776,413 | 10/11/1988 | Forsberg | 175 | 410 | 09/02/1986 |
| C | 5,285,409 | 02/08/1994 | Hwangbo et al. | 365 | 189.12 | 04/21/1992 |
| D | 5,291,807 | 03/08/1994 | Vanderford et al. | 76 | 108.2 | 08/10/1992 |
| E | | | | | | |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|---|--------------|------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| F | | | | | | | |
| G | | | | | | | |
| H | | | | | | | |
| I | | | | | | | |

NON-PATENT DOCUMENTS

| | DOCUMENT (Including Author, Title, Source, and Pertinent Pages) | DATE |
|---|---|------|
| J | | |
| K | | |
| L | | |
| M | | |
| N | | |
| O | | |
| P | | |
| Q | | |
| R | | |
| S | | |
| T | | |
| U | | |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

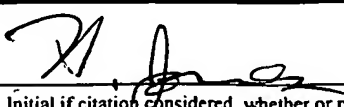
U.S. PATENT AND TRADEMARK OFFICE

| | | | | | |
|---|--|-------------------------------|--|-----------------------------|---------------------------------|
| PTO-1449 | | Application No. 10/766,243 | | Applicant(s) Shilin Chen | |
| Information Disclosure Citation in an Application JAN 31 2005 U.S. PATENT & TRADEMARK OFFICE | | Docket Number 074263.0212 | | Group Art Unit 2128 | Filing Date January 26, 2004 |
| | | | | | |

| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|--------------|------|------|-------|----------|-------------|
| | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
| A | | | | | | |
| B | | | | | | |
| C | | | | | | |
| D | | | | | | |
| E | | | | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|--------------|------|---------|-------|----------|-----------------------|
| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES NO |
| F | | | | | | |
| G | | | | | | |
| H | | | | | | |
| I | | | | | | |

| NON-PATENT DOCUMENTS | | |
|----------------------|---|------|
| | DOCUMENT (Including Author, Title, Source, and Pertinent Pages) | DATE |
| J | Rabia, H., Oilwell Drilling Engineering: Principles and Practice, University of Newcastle upon Tyne, 331 pages | 1985 |
| K | Brief Communication from European Patent Office enclosing letter from the opponent dated December 2, 2004 (074263.0281) | |
| L | | |
| M | | |
| N | | |
| O | | |
| P | | |
| Q | | |
| R | | |
| S | | |
| T | | |
| U | | |

| | |
|---|----------------------------|
| EXAMINER  | DATE CONSIDERED 8/22/05 |
|---|----------------------------|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE